WALCZAK ET AL.

"Method And System for Validating A
Mobile Station Location Fix"

Atty. Docket No. CS10560

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya

Art Unit 2687

1. (Currently Amended) A method for validating a non-network

based location fix of a mobile station [in a communications network],

comprising:

generating a non-network based location fix of the mobile station;

evaluating the validity of the non-network based location fix of

the mobile station by [comparing the non-network based location fix with a

prior network based location fix] determining whether the non-network based

location fix is within a specified range of a prior location fix,

the specified range based on an estimated velocity of the mobile

station and a time interval between the generation of the prior location fix and

the non-network based location fix.

2. (Previously Presented) The method of Claim 1, generating the

non-network based location fix includes receiving global positioning system

signals at the mobile station.

3. (Currently Amended) The method of Claim 1, generating the

prior [network based] location fix by measuring a time related parameter of

signals received at the mobile station from several base stations neighboring

the mobile station.

4. (Currently Amended) The method of Claim 3 [4], translating

the prior [network based] location fix and the non-network based location fix

into a common format prior to comparing the prior network and non-network

based location fixes.

WALCZAK ET AL.

"Method And System for Validating A
Mobile Station Location Fix"
Atty. Docket No. CS10560

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya Art Unit 2687

Claim 5 (Canceled).

Claim 6 (Canceled).

Claim 7 (Canceled).

8. (Currently Amended) The method of Claim 1, the communications network having a plurality of base stations,

generating the prior [network based] location fix by measuring at the mobile station several base station signals neighboring the mobile station,

evaluating the validity of the non-network based location fix by determining whether the non-network based location fix is within a specified range of the prior [network based mobile station] location fix.

9. (Previously Presented) The method of Claim 1, evaluating the validity of the non-networked based location fix by comparing it to at least one of a plurality of prior network based location fixes.

Claim 10 (Canceled).

11. (Currently Amended) The method of Claim 1,

estimating a future location fix of the mobile station based on a plurality of prior [network based] location fixes,

evaluating the validity of the non-networked based location fix by determining whether the non-network based location fix is within a specified range of the estimated location fix.

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya Art Unit 2687

12. (Currently Amended) A method for validating a satellite positioning system based location fix of a satellite positioning system enabled cellular mobile station [in a cellular communications network], comprising:

generating a satellite positioning system based location fix of the mobile station;

ordering a plurality of prior location fixes by applying a corresponding time of acquisition attribute thereto;

evaluating the validity of the satellite positioning system based location fix by comparing the satellite positioning system based location fix to [a prior network based location fix] at least one of the plurality of time stamped prior location fixes.

13. (Currently Amended) The method of Claim 12, generating the prior location [fix] fixes by measuring at the mobile station a time related parameter of signals received from a plurality of cellular base stations of the cellular communications network neighboring the mobile station.

14. (Currently Amended) The method of Claim 12,

evaluating the validity of the satellite positioning system based location fix by determining whether the satellite positioning system based location fix is within a specified range of the at least one prior location [fix] fixes,

defining the specified range based on an estimated velocity of the mobile station and a time interval between generation of the <u>at least one</u> prior network based location fix and the satellite positioning system based location fix.

Atty. Docket No. CS10560

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya Art Unit 2687

15. (Currently Amended) The method of Claim 12, evaluating the

validity of the satellite positioning system based location fix by comparing it to

more than one of the plurality of time stamped prior location fixes [at least

one of a plurality of prior network based location fixes].

Claim 16 (Canceled).

Claim 17 (Canceled).

Claim 18 (Canceled).

Claim 19 (Canceled).

20. (Original) The method of Claim 12, generating a subsequent

satellite positioning system based location fix of the mobile station if a prior

satellite positioning system based location fix is invalid.

21. (Currently Amended) A method for validating a location fix of

a mobile station, comprising:

generating a plurality of location fixes of the mobile station;

estimating a future position fix of the mobile station based on the

plurality of location fixes;

evaluating the validity of a recently generated location fix of the

mobile station by determining whether it is within a specified range of the

estimated future position fix of the mobile station [comparing the location fix

WALCZAK ET AL.

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Mobile Station Location Fix"

Atty. Docket No. CS10560

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya Art Unit 2687

for which the validity determination is required to a previously generated

mobile station location fix].

Claim 22 (Canceled).

Claim 23 (Canceled).

Claim 24 (Canceled).

Claim 25 (Canceled).

26. (Currently Amended) The method of Claim 21 [25], estimating

a velocity of the mobile station, defining the specified range based on the

estimated velocity and time interval.

27. (Currently Amended) A cellular mobile station, comprising:

a satellite positioning system signal reception interface in the

mobile station for receiving satellite positioning system signals;

a cellular communications network interface in the mobile station

for communicating with a cellular communications network;

an information processor coupled to the satellite positioning

system signal reception interface and the cellular communications network

interface,

the information processor for evaluating the validity of a satellite

positioning system based location fix [by comparing it to] based on at least one

prior mobile station location fix stored in memory.

WALCZAK ET AL.

"Method And System for Validating A
Mobile Station Location Fix"
Atty. Docket No. CS10560

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya Art Unit 2687

Claim 28 (Canceled).

29. (Original) The mobile station of Claim <u>27</u> [28], the at least one

prior mobile station location fix is a network based mobile station location fix,

the information processor for determining the network based mobile station

location fix based on cellular base station signal strength data received by the

cellular communications network interface.

30. (Original) The mobile station of Claim 27, the information

processor for determining a network based mobile station location fix based

on a timing relationship between cellular communication network signals

received by the cellular communications network interface, the information

processor for evaluating the validity of a satellite positioning system based

location fix by comparing it to at least one prior network based mobile station

location fix.

31. (Original) The mobile station of Claim 27, the information

processor for estimating a future position fix of the mobile station and

evaluating the validity of the satellite positioning system based location fix by

determining whether it is within a specified range of the estimated future

position fix.

32. (Original) The mobile station of Claim 27, the information

processor for evaluating the validity of a satellite positioning system based

location fix by determining whether it is within a specified range of at least

one prior mobile station location fix.

WALCZAK ET AL.

"Method And System for Validating A
Mobile Station Location Fix"
Atty. Docket No. CS10560

Appl. No. 09/769,122 Confirm. No. 5562 Examiner S. Bhattacharya Art Unit 2687

33. (Original) The mobile station of Claim 27, the information processor for evaluating the validity of the satellite positioning system based location fix by determining whether it is closer to a more recent prior location fix than it is to a less recent prior location fix.